



The Renovator

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Structural repairs of ramp benefit appearance

The old adage, "beauty is only skin deep," does not apply to the North Parking Pedestrian Ramp project. Not only did the cracks and buckling areas disappear, the upper ramp portion is now structurally sound with a new foundation that includes beams, a bridge deck and parapet wall (tenants may remember the "leaning tower of parapet" where the wall was cracked and leaning in toward the ramp).

The lower portion of the ramp, which had been pushed by movements in the upper portion, was sliding downhill. Now the new slab blends with the upper portion of the ramp and includes shear keys that grab the soil to prevent any future shifts. Repair of the lower portion of the ramp is now complete and open for pedestrian access.

However, repair of the upper portion of the ramp did reveal additional problems with the concrete decking outside the Pentagon Athletic Club that serves both as a walkway and the club's roof.

"During demolition of the sidewalk area, the contractor discovered that sub-drainage from the roof was flowing out from the Northeast end straight out into the soil," said Susan Wong, project engineer. "This drainage may have caused or accelerated some of the structural problems at the bridge."

Because this older drainage could cause future damage, plans now include the repair and replacement of the drainage system and installation of new waterproofing material.

Beginning in April, the sidewalk across from the athletic



Susan Wong, project engineer, and Chris Pilarcik, superintendent, measure the PAC roof decking that will be removed.



The lower portion of the ramp is now repaired and open to pedestrian traffic.

club upper entrance along the parapet (outside) wall will be restricted while repairs are made. Like the earlier ramp repairs, a narrow passage leading to the club doors and the ramp will remain open. Repairs in this area are scheduled for completion in August.

Following completion of the decking along the parapet wall, repair of the decking adjacent to the upper level

athletic club building entrance will begin. "Repair of the decking adjacent to the entrance will require the upper level doors to close intermittently, but for no more than one day at a time," said Wong. When these one day closures are needed, the lower level entrance will remain open and temporary walkways will be placed to facilitate pedestrian access.

Tenant input crucial to basement design plans

Construction springs from design, but in the case of the Pentagon basement renovation, design also springs from construction.

This bilateral process is the result of the piece-by-piece construction that must be performed to maintain the Pentagon as a functioning office building. Design and construction become an overlapping process.

The similarity in areas to be renovated, such as the three phases of the basement, also means that lessons learned from one area can be applied to the next area.

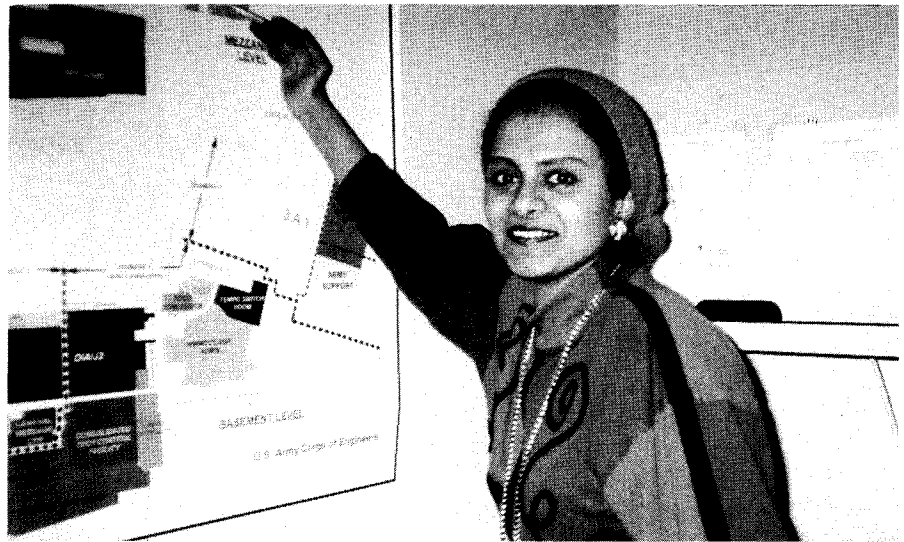
"This process allows for a more cost and time effective design and construction process, while maintaining the overall satisfaction of the tenants," said Dr. Manal Ezzat, design manager, Basement Renovation Office.

Design completion

The Phase I basement area is scheduled for occupancy this fall. "Designs are usually completed approximately three months before physical construction begins," said Ezzat.

"During Phase I, we encountered some unanticipated site conditions that required us to make structural, mechanical and electrical design changes," she said. "Now with our experience and lessons learned from the first phase, design and construction should proceed much more smoothly."

The lessons learned from Phase I provide a good starting dialogue for design discussions among the Corps, the Phases II



Dr. Manal Ezzat, basement design manager, points to an office on a block diagram design graphic.

and III tenants, and WHS, Pentagon Renovation & Planning Office (PR&PO).

Space allocations

The design process begins with space allocations. Space allocations, or the square footage that the tenants will occupy and the approximate locations, are determined by WHS, PR&PO.

From there, the Corps and its Architectural/Engineering contractor, URS Consultants, complete an initial block diagram design.

The next step requires the tenant to complete the Department of Defense Space Requirements Data form.

"The form gets specific requirements from the future tenant, such as the number of administrative areas, private offices, computer and conference rooms, rest rooms, etc.," said Ezzat.

"What we are proposing for the future phases, is to have a

'town meeting' of sorts, where the future tenants will receive their forms, and we can have a face-to-face interaction to aid them in developing these requirements. We want to establish guidelines and schedules, and convey to the tenants our limitations, and the longevity of their decisions."

Prototypical plans

"Prototypical plans, which generically meet Department of Defense building/office standards, usually fulfill tenants' requirements," said Ezzat. "We just want the tenants to understand that when space planning these areas, they should not be 'customized' to a specific group of employees or personal taste—the objective is a long term, flexible office space to satisfy the agency's needs well into the 21st century."

As part of the guidelines, Ezzat also wants to ensure that the tenants understand the building codes that may restrict design.

Design (con't from p.2)

"There is a minimum requirement for the number of rest rooms based on the number of occupants and the amount of gross space."

Building codes

Similarly, there are architectural, fire, safety, Americans with Disabilities Act, mechanical and electrical codes that must be followed. "These codes will ensure a safe office environment as we lay out the space to satisfy operational requirements as well," she said.

Design changes

The components of construction may seem simple, but a "simple" change may prove more costly than the requestor realizes.

"Moving a wall may seem like a simple task, but when you move the wall, it changes the ceiling grid, carpet requirements and possibly the mechanical/electrical configurations as well."

More cost efficient

Ezzat hopes a meeting with the tenants who will occupy Phases II & III of the basement can be set up sometime later this spring. "The earlier we meet, the more time it gives us to discuss specific requests or make changes to ensure requirements are incorporated into design documents, minimizing the potential for cost growth later during actual construction."

Basement offices now discernible

The Phase I basement area now has the look and feel of a traditional office area, which is quite a contrast to the open, excavated areas of eight months ago. Drywall partitions now separate a majority of both the basement and mezzanine levels into their ultimate office areas.

Installation of the raised flooring needed for the computer intensive offices is also well under way. Ceiling grids and lighting now cover over 50 percent of the basement level, and add to the ambience of office space.

The construction portion has now progressed to a point where tenant telecommunication systems are expected to be implemented by early May. IM&T, assisted by the tenant, is largely responsible for this portion of the work.

DISA and the Air Force will be the first organizations to set

up their telecommunication requirements.

Final construction activities, such as the installation of carpet and furnishings will overlap the telecommunications work.

"The Air Force has agreed to the basement level finishings," said Robert Andreae, chief, Air Force Renovation and Support Services. Installation of finishings will begin this summer.

The tenants' equipment and furnishings will begin to occupy the new space this summer, but the tenants themselves will not be far behind.

Tenant occupancy is scheduled for the fall of 1996, but tenants are already coordinating these transitions.

"Plans to move some Air Force offices from the Phase II area into the renovated space must be made now because of the complexity of their operations," said Andreae.



Office areas in the renovated Phase I basement area, like this Air Force (C2 ADP) customer service center, are now easily recognized.

Sewage lift station requires small, temporary work areas

The Sewage Lift Station project is now in full swing and will continue to branch out into various areas of North Parking, but with minimum impact to parking and tenants. The original work area along Lane 64G has expanded to the upper areas (closest to the jogging path) of Lanes 54G through 59G.

The work area will next expand in the opposite direction (toward the Pentagon) so the

station's connection to the building can be made.

Plans regarding work schedules, types of work activities and the number of parking spaces affected, are being coordinated to ensure there is minimum impact to parking and building tenants. This next stage is anticipated to begin in May.

Lines for the lift station will eventually cross North Parking toward the Heating and Re-

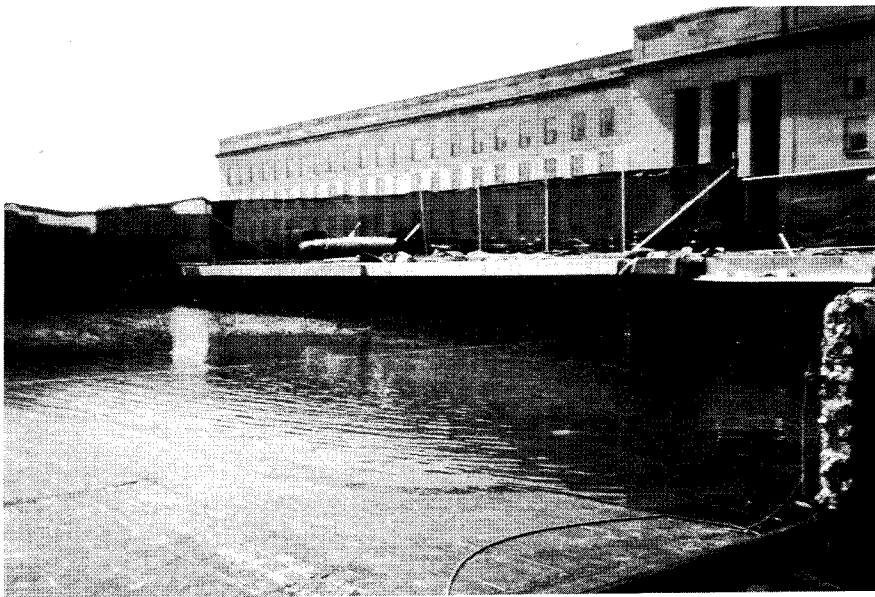
frigeration Plant area.

However, this portion of the work will not take place until work is complete in the present construction area.

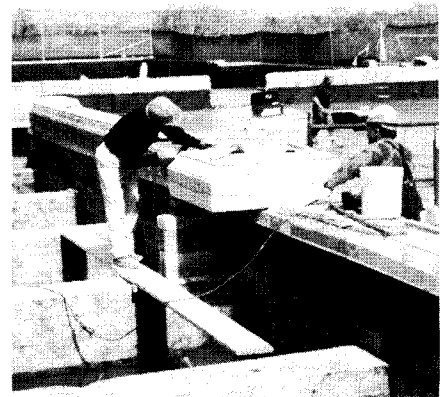
Parking spaces that were annexed for the current work will be returned for service before additional work begins.

Future work areas, like current work areas, will require only a minimal number of parking spaces temporarily blocked-off while construction is under way.

River Terrace waterproofing undergoes water testing



The standing water that seems to have "accumulated" on various areas of the Phase I River Terrace is part of strategic water testing of the waterproofing material. Approximately two inches of water is pumped into an area and let stand for 24 hours as a test for drainage and leaks. The water is pumped out after tests are completed.



Historic stonework is restored to its original location in the Phase I area.

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